

Title (en)
BIOACTIVE SURFACE LAYER FOR BONE IMPLANTS

Title (de)
BIOAKTIVE OBERFLÄCHENSCHICHT FÜR KNOCHENIMPLANTATE

Title (fr)
COUCHE SUPERFICIELLE BIOACTIVE POUR IMPLANTS OSSEUX

Publication
EP 1056485 A1 20001206 (DE)

Application
EP 96942231 A 19961223

Priority
CH 9600461 W 19961223

Abstract (en)
[origin: US6221111B1] A bioactive surface layer with 0.01 μm to 5 mm thickness is suitable for a metallic bone implant. The surface layer has the following composition: (A) calcium compounds (CaX) consisting of crystalline calcium phosphate (CaP), calcium apatites (CaAp) and/or calcium carbonate (CaCO_3), in a proportion expressed by the following equation: $100\% (\text{CaX}) = \text{SIGMA}[x \% (\text{CaP}) + y \% (\text{CaCO}_3)]$, in which $x+y+z=100$, $0 \leq x \leq 100$; $0 \leq y \leq 100$; $0 \leq z \leq 100$, and in the form of particles 20 nm to 4 mm; and (B) amorphous or crystalline metal oxide (MeO). The ratio between CaX and MeO in the surface layer can be preferably varied as a result of the specific coating process. The thickness of the surface layer lies between 0.01 μm and 5 mm and the CaX particles are 20 nm to 4 mm large.

IPC 1-7
A61L 27/00

IPC 8 full level
A61L 27/00 (2006.01); **A61L 27/32** (2006.01); **A61F 2/00** (2006.01)

CPC (source: EP US)
A61L 27/32 (2013.01 - EP US); **A61F 2310/00796** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB IE LI LU NL PT SE

DOCDB simple family (publication)
WO 9828025 A1 19980702; AT E220565 T1 20020815; CA 2276015 A1 19980702; DE 59609458 D1 20020822; EP 1056485 A1 20001206; EP 1056485 B1 20020717; EP 1056485 B8 20030917; JP 2000513615 A 20001017; US 6221111 B1 20010424

DOCDB simple family (application)
CH 9600461 W 19961223; AT 96942231 T 19961223; CA 2276015 A 19961223; DE 59609458 T 19961223; EP 96942231 A 19961223; JP 53229098 A 19961223; US 33169899 A 19990123